

Title: A New Structure of a Club Head for a Putter

### Field of the Invention

The present invention relates to a new structure of a club head for a putter, in particular to a putter formed from a combination of two pieces by inserting a striking surface and rod into a connecting portion of the club head. The striking surface and rod piece is made from light materials. Therefore, the putter in accordance with the present invention has a low center of mass and easily hits the center of a ball.

### Background of the Invention

Many people place emphasis on outdoor sports on the weekend. Golf has become more and more popular. However, golf is a sport that requires exceptional skills, so that playing well for most people is not easy. Therefore, many people tend to give up halfway, and this perceptibly limits the development of golf. Hitting the center of the ball is difficult for general players since not every one is a professional. For general players, controlling the key point of hitting the ball is not easy. Thus, a good golf club would be helpful. Once a player has excellent skill when using a good golf club, he will perform well.

Putting the ball on the green is the key to winning or losing, thus, having a good putter would be very helpful. Therefore, one has to choose golf clubs very carefully. The main features of a good golf club include having a low center of mass that is at the same height as the center of the ball, so that a golfer can hit the ball precisely and will not deviate to influence the path of the club. The conventional ways to manufacture a putter follow:

1. Taiwan Patent publication No. 117286 (see Fig. 1) provides an integrally formed club head 1. The club head 1 has a hosel 10 to attach a club shaft 11. However, because the club head 1 and the hosel 10 are formed integrally and are made from the same material, so that the center of mass A of the club head is higher than the center B

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of the ball, as shown in Fig.2. Thus, such structure needs to provide some recesses or some weighted blocks to obtain the desired center of mass. This is time-consuming and not easy in manufacturing.

2. Taiwan Patent publication No. 303710 provides a club head 2 and a hosel 20 that are not formed as a single piece, as shown in Fig. 3. The hosel 20 is inserted into the club head 2 and then connected to a club shaft 21. However, because of the weight and bending of the hosel 20, the center of mass A will offset when the hosel 20 is inserted into the club head 2, as shown in Fig. 4. This is not convenient and will easily cause a lose of precision when putting a ball.

3. Taiwan Patent publication No. 271622 provides a club head 3 having a plurality of screw holes 30, as shown in Fig. 5. Choosing different screw holes to fasten the hosel 31 to the club shaft 32 results in different centers of mass A, as shown in Fig. 6. However, this structure easily becomes loose under a long-term striking. The screwing member N may loosen that makes the center of mass offset and makes hitting the ball precisely not easy.

In view of the foregoing drawbacks, the inventor invented the present invention based on his experience and with his own efforts.

The object of the invention is to provide a club head having a low center of mass and a center of mass that will not shift, such that it is easy to hit the center of the ball.

The preferred embodiment will be described with reference to accompanying drawings.

#### Brief description of the drawings

Fig. 1 is an exploded perspective view of a conventional putter;

Fig. 2 is a front plan view of the conventional putter in Fig. 1 showing the center of mass and the outline of a ball;

Fig. 3 is an exploded perspective view of another conventional putter;

Fig. 4 is a front plan view of the conventional putter in Fig. 3 showing the center of mass of the putter and the outline of a ball;

Fig. 5 is an exploded perspective view of another conventional putter;

Fig. 6 is a rear plan view of the conventional putter in Fig. 5 showing the center of mass;

Fig. 7 is an exploded perspective view of a putter in accordance with the present invention;

Fig. 8 is a perspective view of the putter in Fig. 7;

Fig. 9 is a cross sectional side plan view of the putter in Fig. 7 showing the center of mass and a ball;

Fig. 10 is an exploded perspective view of another embodiment of a putter in accordance with the present invention;

Fig. 11 is an exploded perspective view of the putter in Fig. 10 with the screws; and

Fig. 12 is a cross-sectional side plan view of the putter in Fig. 11.

#### **Detailed Description of Preferred Embodiments**

With reference to Fig. 7, the invention provides a club head 4 having a recessed connecting portion 40 in the front of the club head 4 and a slot 41 formed on the right side of the club head 4. A striking block 5 is inserted in the connecting portion 40, and is made from light material. The striking block 5 has a striking surface 50 on the front. The striking surface 50 on the rear right side has an inserting block 500 that corresponds to the slot 41. The inserting block 500 has a rod 51 on the top, and a hosel 52 is formed on the rod 51.

The combination of the elements is shown in Fig. 8. The striking surface 50 of the striking block 5 is inserted into the connecting portion 40 of the club head 4, and the inserting block 500 of the striking surface 50 is inserted into the slot 41. This forms a combination of two pieces. The club shaft C is then connected to the hosel 52 on the rod 51. Thus, the combination is easily completed. The striking surface 50 and the rod 51 are formed as a single piece, and both are made from a light material, such that the club

head 4 has a lower center of mass A that is at the same height as the center of mass B of the ball, as shown in Fig. 9. Therefore, the user can easily control the ball and hit the center of the ball.

A further embodiment of the invention is shown in Fig. 10. Glue 6 is spread on the connecting portion 40 and the slot 41 of the club head 4, and the striking surface 50 and the inserting block 500 are then attached to the connecting portion 40 and the slot 41 of the club head 4. Therefore, the striking block 5 is mounted in the club head 4 more tightly.

A further embodiment of the invention is shown in Fig. 11. Holes 42 are formed in the connecting portion 40 and the slot 41 of the club head 4. Holes 53 corresponding to the holes 42 in the connecting portion 40 and the slot 41 are formed in the striking surface 50 and the inserting block 500. Screws 6 are screwed into the holes 42 and 53 to connect the club head 4 to the striking block 5. The waterproof elements 7 are provided behind the screws 6 to protect the screws 6 from water (as shown in Fig. 12). Therefore, the striking block 5 and the club head 4 can be connected more tightly.

From the description above, the invention has some advantages as follows:

1. Because the striking surface and the rod are formed as a single piece and are made from light material, the putter is not heavy. In addition, the center of mass of the club head will not shift upward and can be kept at the same height as the center of mass of the ball. Therefore, the user can easily control the ball and easily hit the center of the ball.
2. Because the striking block is inserted into the club head, a combination of two pieces is formed. Further, the glue or screws are used to connect the striking block and the club head more tightly. Thus, the striking block will not easily loosen when hitting the ball, and will not influence the accuracy of striking.
3. The striking surface is made from light material. Therefore, the reacting force of striking will be absorbed by the club head, such that the user will not feel the reacting force.

From the description above, the present invention indeed has more advantages and improvements than the conventional product. Further, there is no structure the same, which has been published or put to public use, prior to the present application. Therefore, the present application meets the requirement of a new utility model patent. It would be appreciated very much if the present application could be patented earlier.

**What is claimed is**

1. A new structure of a club head for a putter comprising:
  - a club head (4) with a connecting portion (40) in the front and a slot (41) formed on the right side of the connecting portion (40); and
  - a striking block (5) mounted in the connecting portion (40) and a striking surface 50 provided in the front, said striking surface 50 having an inserting block (500) on the right side, said inserting block (500) having a rod (51) on the top, said rod (51) forming a hosel (52) to connect to a club shaft, the striking surface 50 and the rod (51) being formed as a single piece from light materials; whereby inserting the striking surface and the rod (51) into the connecting portion (40) of the club head, a combination of two pieces is formed, and the striking surface and the rod (51) are formed from light material, in order to prevent the center of mass from offsetting upward, thus, a club head of a putter with a low center of mass (A) and that easily hits the center of the ball (B), is provided.
2. The new structure of a club head for a putter according to Claim 1, wherein glue is spread on the mounting surfaces of the connecting portion and the slot of the club head, such that the striking block and the club head can be connected more tightly, and will not loosen to influence the accuracy when striking.
3. The new structure of a club head for a putter according to Claim 1, wherein holes are formed in the connecting portion and the slot of the club head, holes

corresponding to the holes in the club head are formed in the striking surface and the inserting block, and screws screw into the holes to connect the club head to the striking block, and waterproof elements are mounted behind the screws to protect the screws from water, therefore, the striking block and the club head can be connected more tightly.

### ABSTRACT OF DISCLOSURE

The present invention provides a new structure of a club head for a putter, in which the striking surface and the rod are formed as a single piece and are made from light material. By inserting the striking surface and the rod into the connecting portion of the club head, a combination of two pieces is formed. Therefore, the center of mass of the club head will not shift upward, and can be kept at the same height as the center of the ball, such that the golfer can easily hit the center of the ball.

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## [57]申請專利範圍：

1. 一種高爾夫球推桿頭新構造，包括有一球桿頭，該球桿頭前方設有接合部，該接合部右方連設有嵌槽；一打擊塊，係嵌設於球桿頭之接合部內，該打擊塊前方設有打擊面板，該打擊面板右方設有嵌塊，該嵌塊上方設有桿部，恐桿部上方設有插置桿以供套設球桿，又打擊面板及桿部係一體成型同樣為輕質材料所製造而成；藉由打擊面板及桿部嵌入球桿頭之接合部內，形成二片式之組合，而打擊面板及桿部係由輕質材料所製造完成，故不會造成球桿頭之重心往上偏移，如此，則可提供一種重心低，且易於掌握擊球點之高爾夫球推桿頭新構造。
2. 如申請專利範圍第1項所述之高爾夫球推桿頭新構造，其中該球桿頭之接合部及嵌槽內塗滿黏膠，如此可使打擊塊與球桿頭之嵌合更緊密，不致於因長期打擊造成鬆動，而影響到擊球點之準確。

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3. 如申請專利範圍第1項所述之高爾夫球推桿頭新構造，其中該球桿頭之接合部及嵌槽內各設有貫穿球桿頭之穿孔，又打擊面板及嵌塊背面設有螺孔，當打擊塊與球桿頭嵌合後，可藉由二螺接元件分別由球桿頭背面之穿孔內穿過，而螺入打擊面板及嵌塊之螺孔內，再將二防水塞設入球桿頭之穿孔內，如此可使打擊塊與球桿頭之嵌合更緊密，而不易鬆動。

## 圖式簡單說明：

第一圖：係習知推桿(一)之立體分解圖。

第二圖：係習知推桿(一)之重心及高爾夫球重心示意圖。

第三圖：係習知推桿(二)之立體分解圖。

第四圖：係習知推桿(二)之重心及高爾夫球重心示意圖。

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第五圖：係習知推桿(三)之立體分解圖。

第六圖：係習知推桿(三)之立體組合圖。

第七圖：係本創作之立體分解圖。

第八圖：係本創作之立體組合圖。

第九圖：係本創作之重心及高爾夫

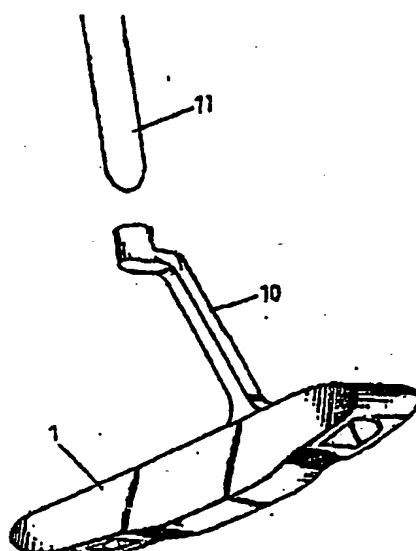
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球重心示意圖。

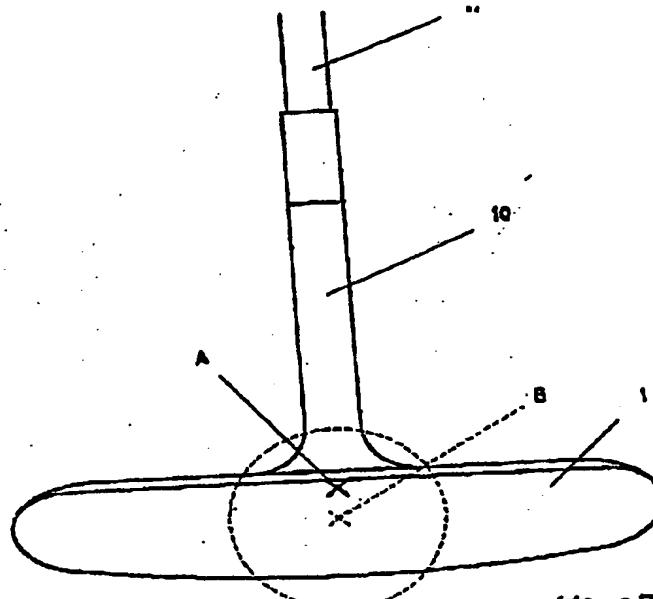
第十圖：係本創作另一實施例之立體分解圖。

第十一圖：係本創作再一實施例之立體分解圖。

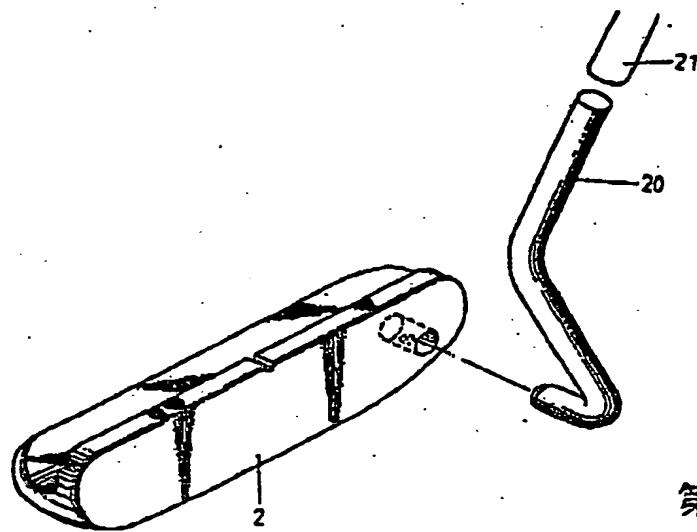
第十二圖：係本創作再一實施例之組合剖視圖。



第一圖  
(Fig. 1)

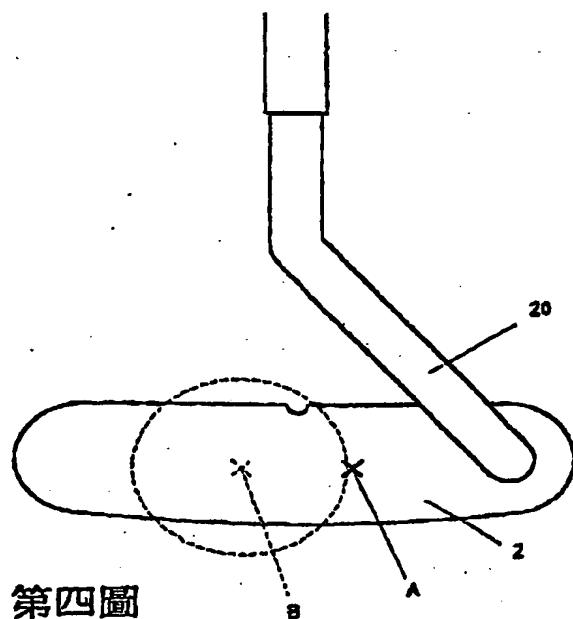


第二圖  
(Fig. 2)



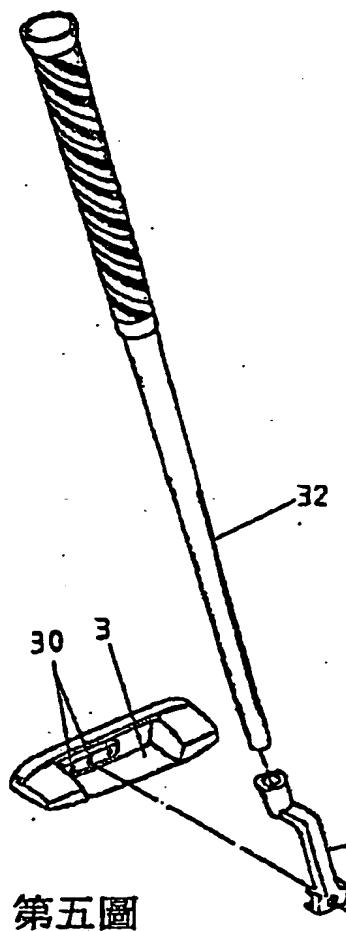
第三圖  
(Fig. 3)

(3)



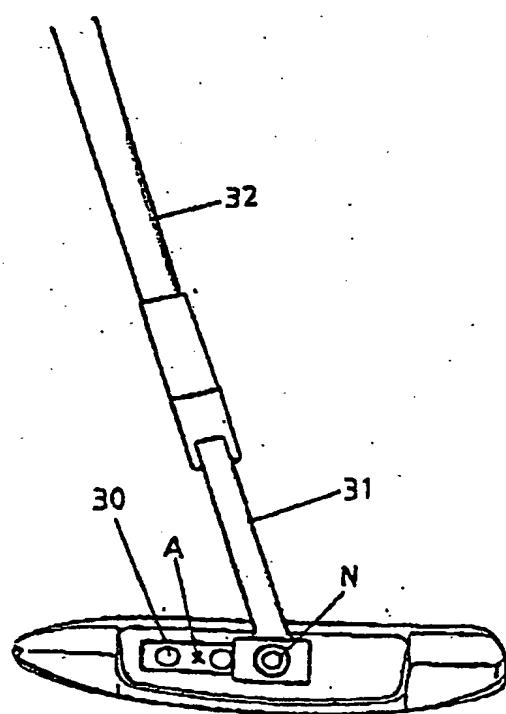
第四圖

(Fig. 4)



第五圖

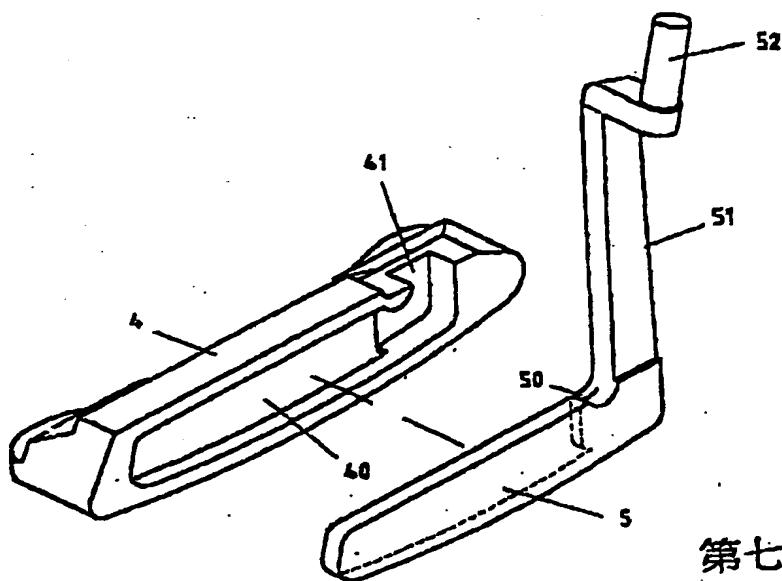
(Fig. 5)



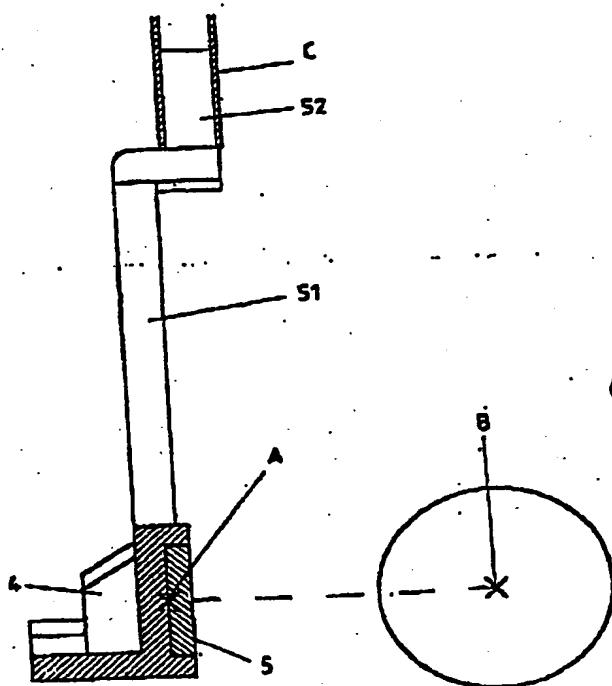
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(Fig. 6)

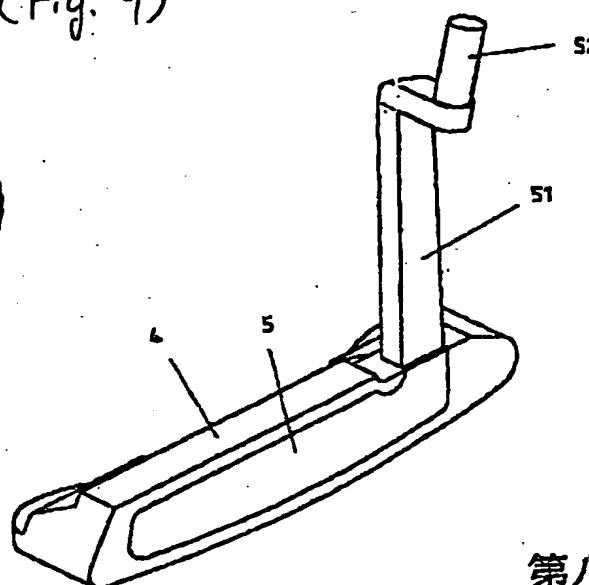
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第七圖  
(Fig. 7)

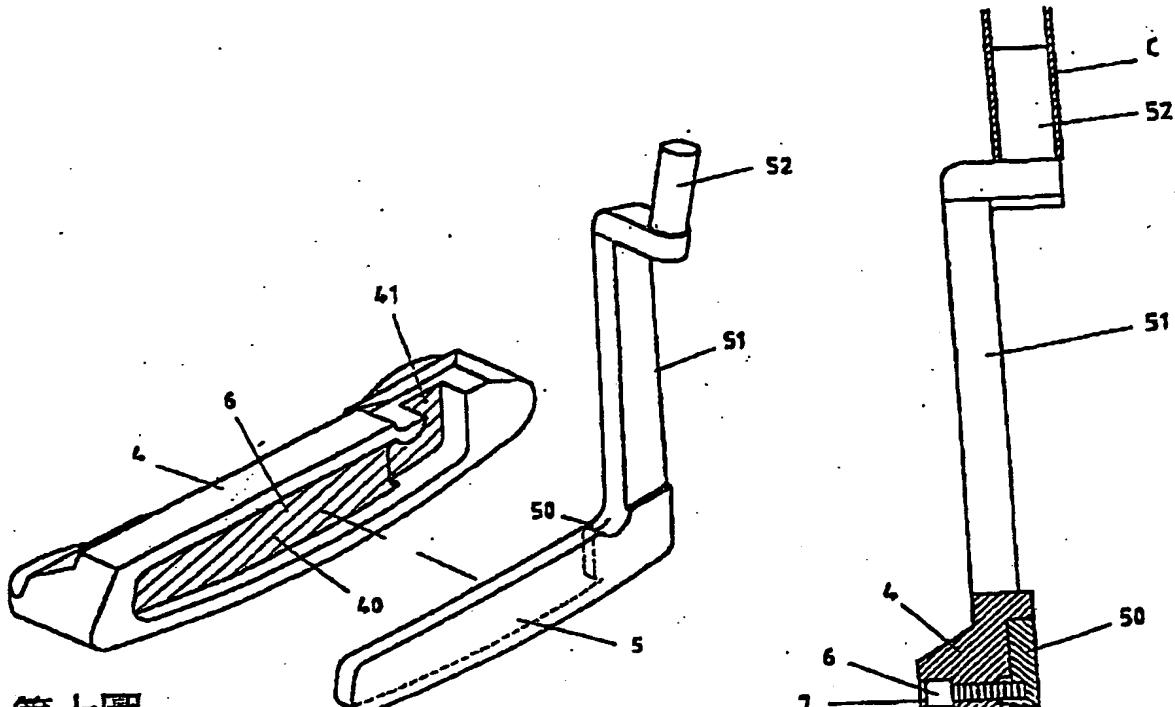


第九圖  
(Fig. 9)



第八圖  
(Fig. 8)

(5)

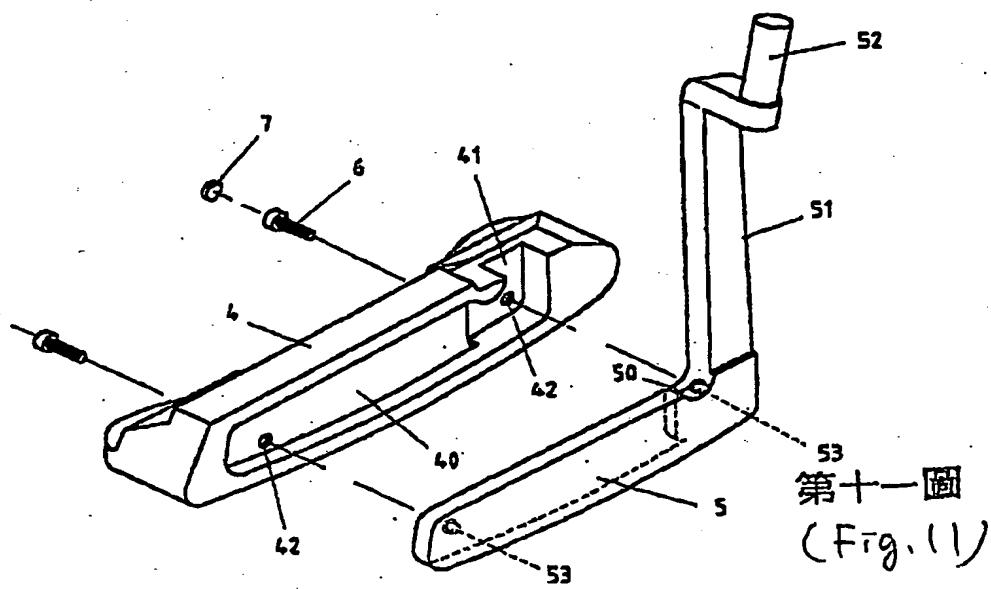


第十圖

(Fig. 10)

第十二圖

(Fig. 12)



第十一圖

(Fig. 11)

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